

Title (en)
POLYCRYSTALLINE COMPACTS INCLUDING METALLIC ALLOY COMPOSITIONS IN INTERSTITIAL SPACES BETWEEN GRAINS OF HARD MATERIAL, CUTTING ELEMENTS AND EARTH-BORING TOOLS INCLUDING SUCH POLYCRYSTALLINE COMPACTS, AND RELATED METHODS

Title (de)
POLYKRISTALLINE PRESSLINGE MIT METALLLEGIERUNGSZUSAMMENSETZUNGEN IN INTERSTITIELLEN ABSTÄNDEN ZWISCHEN KÖRNERN AUS HARTEM MATERIAL, SCHNEIDEELEMENTE UND ERDBOHRWERKZEUGE MIT SOLCHEN POLYKRISTALLINEN PRESSLINGEN UND ENTSPRECHENDE VERFAHREN

Title (fr)
COMPACTS POLYCRISTALLINS COMPRENANT DES COMPOSITIONS D'ALLIAGE MÉTALLIQUE DANS DES ESPACES INTERSTITIELS ENTRE DES GRAINS DE MATÉRIAU DUR, ÉLÉMENTS DE COUPE ET OUTILS DE FORAGE COMPRENANT CES COMPACTS POLYCRISTALLINS, ET PROCÉDÉS ASSOCIÉS

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Application
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Abstract (en)
[origin: US2012211283A1] Polycrystalline compacts include a polycrystalline material comprising a plurality of inter-bonded grains of hard material, and a metallic material disposed in interstitial spaces between the inter-bonded grains of hard material. At least a portion of the metallic material comprises a metal alloy that includes two or more elements. A first element of the two or more elements comprises at least one of cobalt, iron, and nickel. A second element of the two or more elements comprises at least one of dysprosium, yttrium, terbium, gadolinium, germanium, samarium, neodymium, and praseodymium. The metal alloys may comprise eutectic or near-eutectic compositions, and may have relatively low melting points. Cutting elements and earth-boring tools include such polycrystalline compacts. Methods include the formation of such polycrystalline compacts, cutting elements, and earth-boring tools.

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